

STATE OF MISSOURI  
**DEPARTMENT OF NATURAL RESOURCES**  
MISSOURI CLEAN WATER COMMISSION



**MISSOURI STATE OPERATING PERMIT**

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92<sup>nd</sup> Congress) as amended,

Permit No.: MO-0000710

Owner: Harbison - Walker Refractories Company  
Address: 400 Fairway Drive, Moon Township, PA 15108

Continuing Authority: Same as above  
Address: Same as above

Facility Name: Harbison - Walker Refractories Company – Vandalia Plant  
Address: Central Avenue & Booker Street, Vandalia, MO 63382

Legal Description: SEE PAGE TWO

Receiving Stream: SEE PAGE TWO  
First Classified Stream and ID: SEE PAGE TWO  
USGS Basin & Sub-watershed No.: SEE PAGE TWO

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

**FACILITY DESCRIPTION**

SEE PAGE TWO

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

May 27, 2005  
Effective Date

May 26, 2010  
Expiration Date  
MO 780-0041 (10-93)

Doyle Childers, Director, Department of Natural Resources  
Executive Secretary, Clean Water Commission

Edward Galbraith, Director of Staff, Clean Water Commission

**FACILITY DESCRIPTION** (continued)

**Outfall #001** – Clay & Non-clay Refractories / Clay Mining - SIC #3297, #3255

Non-contact cooling water / Mixer washout / Storm water runoff / Settling basin.

Design flow is 230,000 gallons per day.

Actual flow is dependent upon precipitation.

Legal Description: SE ¼, NE ¼, SW ¼, Sec 8, T52N, R5W, Audrain County

Receiving Stream: Unnamed tributary to Shady Creek (U)

First Classified Stream and ID: Shady Creek (C) (00172)

USGS Basin & Sub-watershed No.: (07110008-010001)

**Outfall #002** – Clay Mining / Brick Finishing – SIC #3297; #3255

Stormwater runoff / Settling basin.

Design flow is 180,040 gallons per day.

Actual flow is dependent upon precipitation.

Legal Description: NW ¼, NW ¼, SW ¼, Sec 8, T52N, R5W, Audrain County

Receiving Stream: Unnamed tributary to Spencer Creek (U)

First Classified Stream and ID: Spencer Creek (C) (00095)

USGS Basin & Sub-watershed No.: (07110007-030001)

**Outfall #003** – Clay Mining / Brick Finishing – SIC #3297; #3255

Design flow is 221,000 gallons per day.

Actual flow is dependent upon precipitation.

Legal Description: SE ¼, SW ¼, SW ¼, Sec 8, T52N, R5W, Audrain County

Receiving Stream: Unnamed tributary to Shady Creek (U)

First Classified Stream and ID: Shady Creek (C) (00172)

USGS Basin & Sub-watershed No.: (07110008-010001)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 3 of 5	
					PERMIT NUMBER MO-0000710	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001 &amp; #002</u> - Note 1						
Flow	MGD	*		*	once/quarter**	24 hr. estimate
Total Suspended Solids	mg/L	80		60	once/quarter**	grab
Oil and Grease	mg/L	15		10	once/quarter**	grab
Temperature	°F	90°			once/quarter**	grab
Sulfate	mg/L	*		*	once/quarter**	grab
Chloride	mg/L	860		860	once/quarter**	grab
Aluminum - Dissolved	mg/L	0.75		0.75	once/quarter**	grab
Settleable Solids	mL/L/hr	1.5		1.0	once/quarter**	grab
Chromium - Dissolved	mg/L	*		*	once/quarter**	grab
pH – Units	SU	***		***	once/quarter**	grab
<u>Outfall #003</u> – Note 1						
Flow	MGD	*		*	once/quarter**	24 hr. estimate
Total Suspended Solids	mg/L	*		*	once/quarter**	grab
Settleable Solids	mL/L/hr	1.5		1.0	once/quarter**	grab
pH – Units	SU	***		***	once/quarter**	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>October 28, 2005</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Part I</u> STANDARD CONDITIONS DATED <u>October 1, 1980 and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

MO 780-0010 (8/91)

#### A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

- \* Monitoring requirement only.
- \*\* Sample once per quarter in the months of March, June, September & December.
- \*\*\* pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.0-9.0 pH units.

Note 1 - Report as no-discharge when a discharge does not occur during the report period.

C. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
  - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
    - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
    - (2) controls any pollutant not limited in the permit.
  - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
  - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

2. All outfalls must be clearly marked in the field.
3. Permittee will cease discharge by connection to areawide wastewater treatment system within 90 days of notice of its availability.
4. Changes in Discharges of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
    - (1) One hundred micrograms per liter (100 ug/L);
    - (2) Two hundred micrograms per liter (200 ug/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
    - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
    - (4) The level established in Part A of the permit by the Director.
  - (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.
5. Report as no-discharge when a discharge does not occur during the report period.

C. SPECIAL CONDITIONS (continued)

6. Water Quality Standards

- (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
- (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
  - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
  - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
  - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
  - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
  - (5) There shall be no significant human health hazard from incidental contact with the water;
  - (6) There shall be no acute toxicity to livestock or wildlife watering;
  - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
  - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.